

CPM-20

MULTIFUNCTION POWER METER

CPM-20 Operation Manual

DESCRIPTION

The CPM-20 series Multifunction Power Meter provide high accuracy measurement, display and communication(Modbus RTU) of all electrical and power quality parameters, including harmonic measurement THD(Total Harmonic distortion)

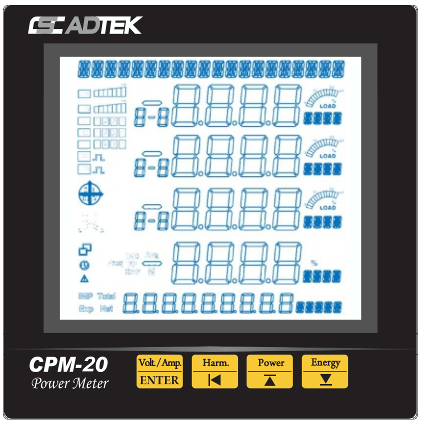
Provides electricity bill ratio (Cost) and carbon dioxide ratio (Co2) set can show cumulative electricity bills and carbon emissions, and suitable for the installation in the power management of remote communication, such as the use of



APPLICATION

Control panels and Motor, Generator monitoring Switchgear distribution systems , Energy Management Power quality analysis

Front Panel



Control button:

Volt/Amp ENTER Enter Key / Voltage /Current display page
Harmonic ◀ Shift Key / Main electric parameters display page
Power ▲ Up Key / Electric parameters display page
Energy ▼ Down Key/ Energy parameters display page

Passwords: 4 digits passwords ; Range : 0000~9999 (Default 1000)

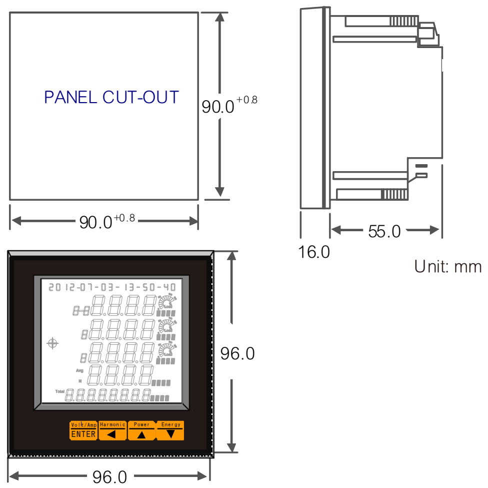
Display : LCD 65(W)x58(H)mm ; White backlight ; Blue wording
Visible under direct sunlight

LCD LED : Backlight on time1~15Min ("0" is always light)
Upper row 20 digits : Display date. time
8.8.8.8: 4 Digitsx 4 rows, 10.0mm Display V, A, Power, Hz,PF, THD,..
8.8.8.8.8.8.8.8: 8 Digits x 1 row, 6.0mm Display Energy parameters(kWh , kVarh)
(icon) : Rs485 communication status ; 2 square status icons
Display Master and Slave status ; Both square on for normal communication

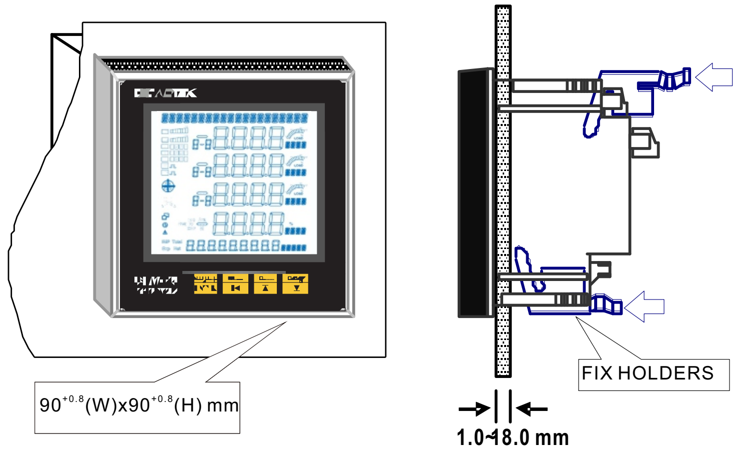
Load status indication : IND : load is inductive CAP : load is capacitive
LOAD%: Display load percentage (icon) : Display load quadrant

量測值附加符號:
A - b ,b - C ,C - A: When on ,value showing Line-Line
A ,b ,C: When on ,value showing in Phase
N : When on ,value showing in Neutral
Total : When on ,value showing Total value
Avg : When on ,value showing Average
MAX MIN : When on ,value showing Maximun / Minimum
THD : When on ,value showing Total harmonics distortion
V KV A KW MVar.. : LED-16 byte display parameters Unit

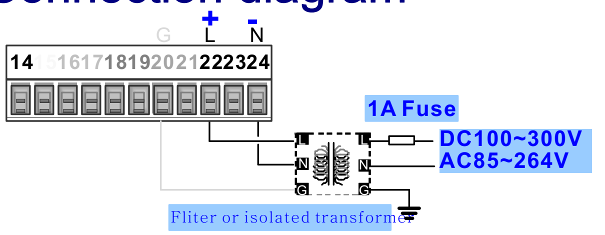
Dimensions



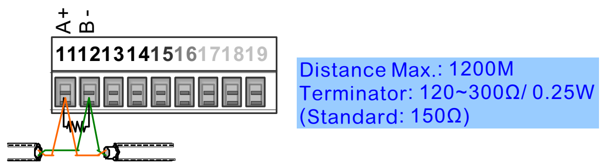
Installation



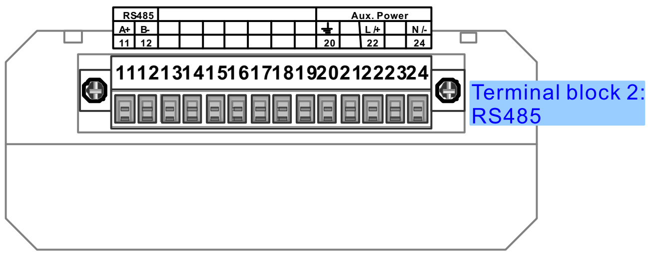
Connection diagram



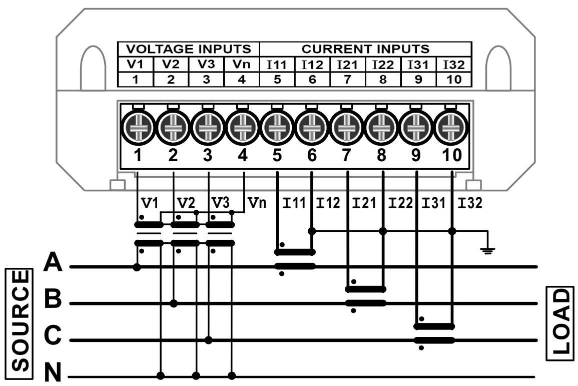
RS485 Port



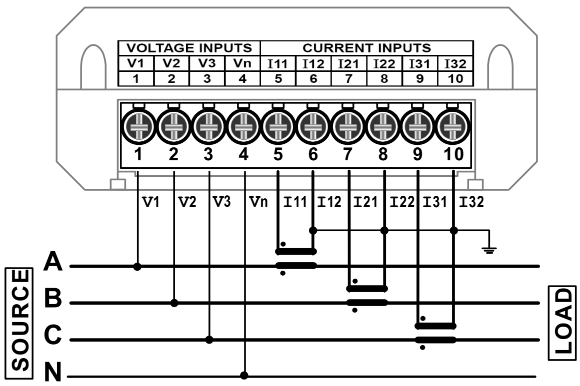
RS485 / (Terminal Block 2)



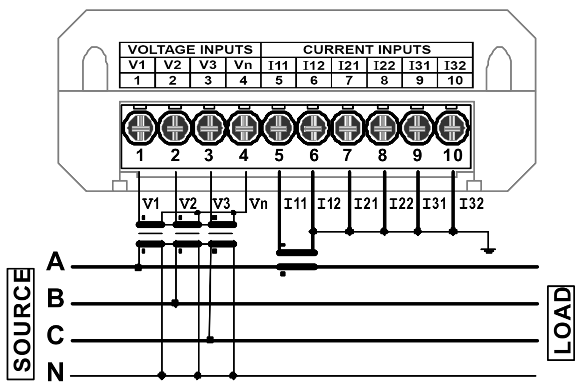
3P4 W – 3PT / 3CT [SET: 3P4W]



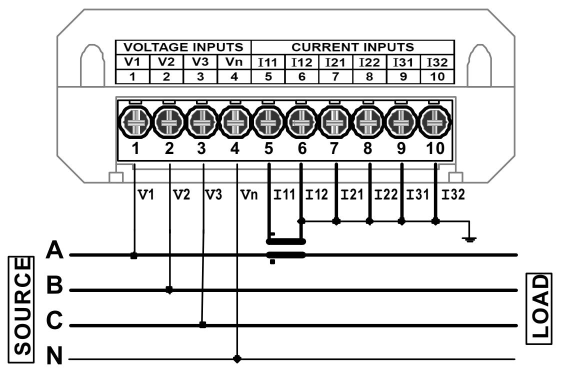
3 P4 W–Direct voltage (No PT) / **3CT** [SET : 3P4W]



3 P4 W Balanced load–**3PT/1CT** [SET:3P4W.b]

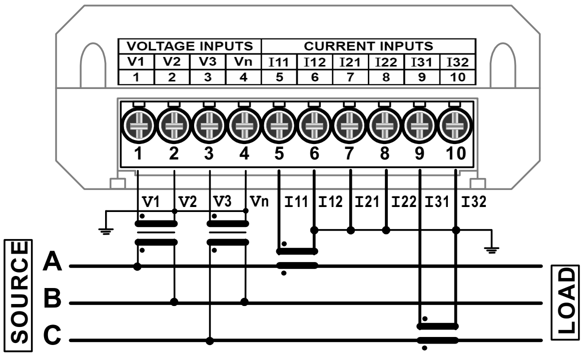


3 P4 W Balanced load – Direct Voltage(No PT)
/1CT [SET:3P4W.b]

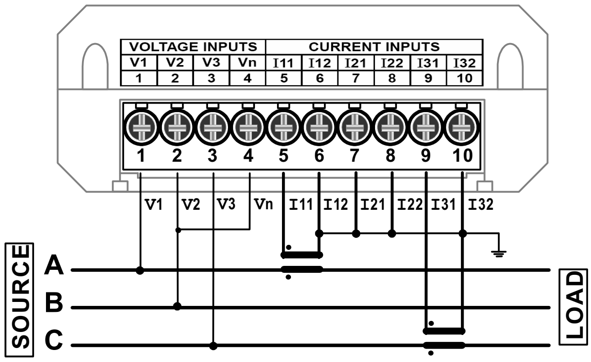


Connection diagram

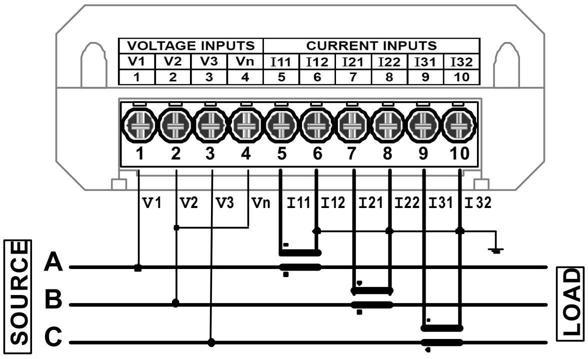
3P3W – 2PT / 2CT [SET: 3P3W]



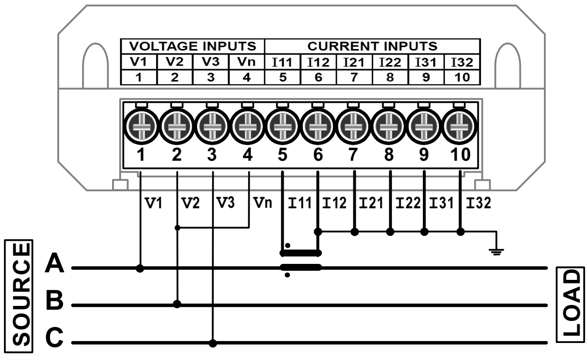
3P3 W– Direct Voltage (No PT) / 2CT [SET: 3P3W]



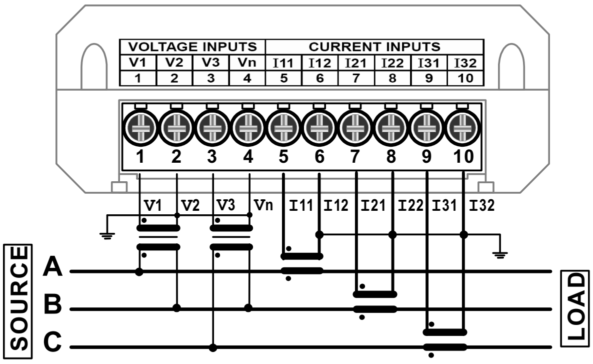
3P3W - (No PT) /3CT [SET:3P3W.3]



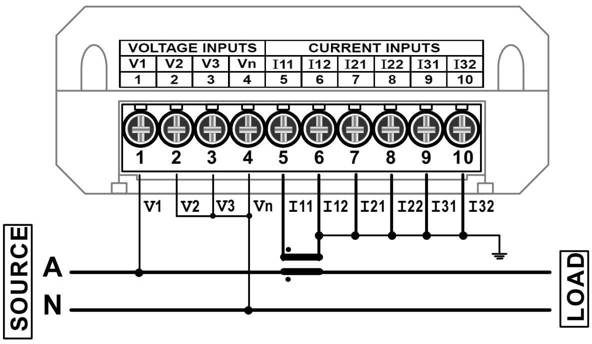
3P3W Balanced load - Direct Voltage (No PT) /1CT [SET:3P3W.b]



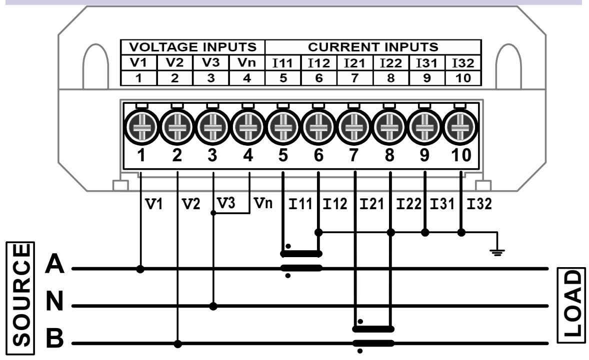
3P3W– 2PT / 3CT [SET:3P3W.3]



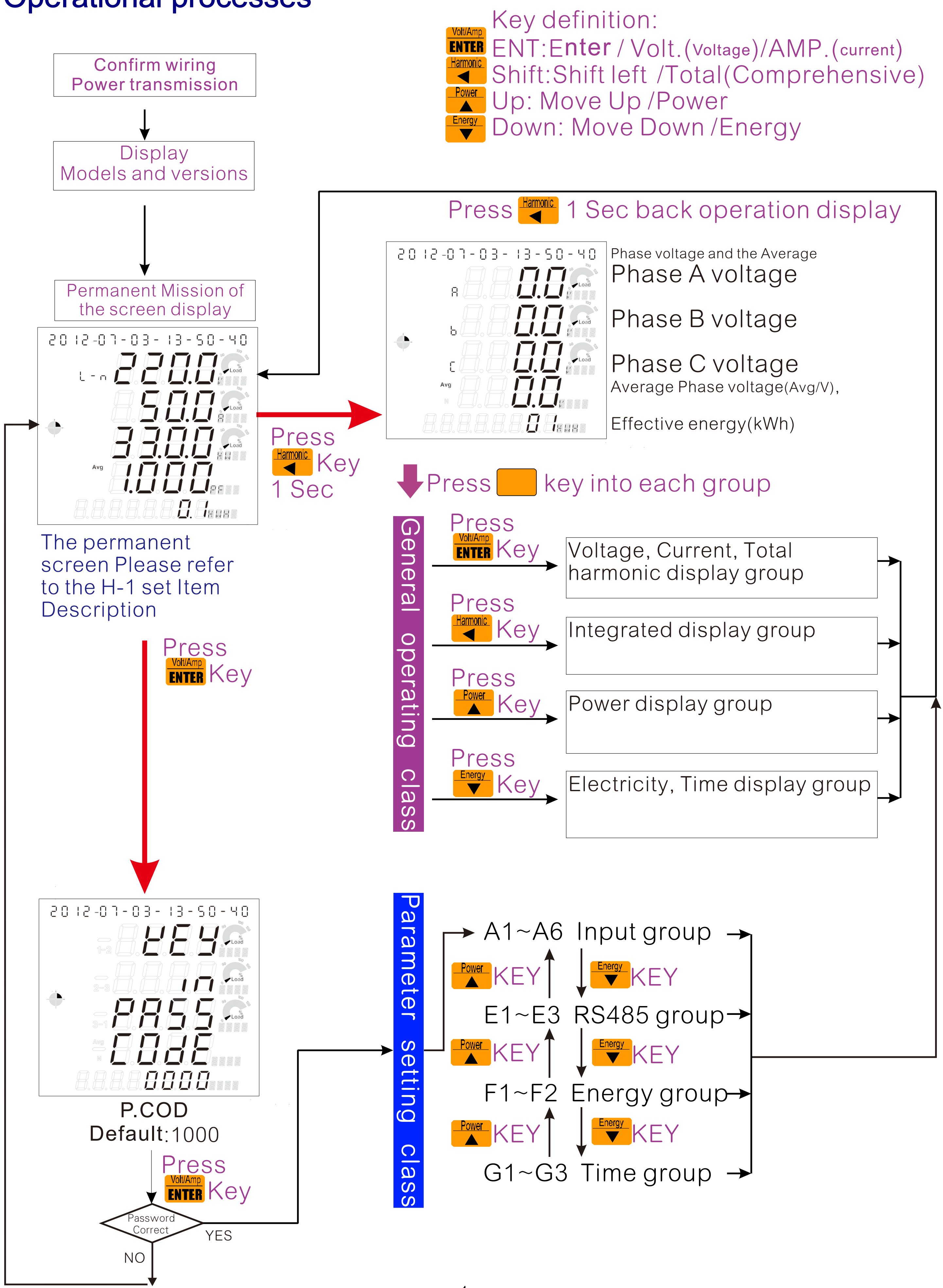
1P2W–[SET: 1P2W]



1P3W–[SET: 1P3W]

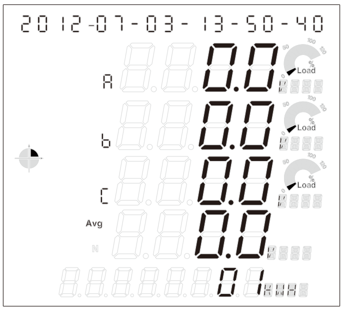


Operational processes



Press ENT Key(Voltage and Current harmonics screen)

Normal screen Harmonic ◀ 1 seconds,
first showed off the voltage value As follows



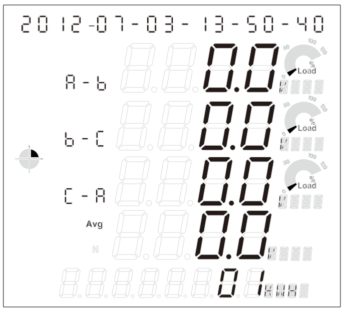
Phase voltage and the Average
Phase A voltage

Phase B voltage

Phase C voltage
Average Phase voltage(Avg/V),

Effective energy(kWh)

Press Volt/Amp ENTER Key



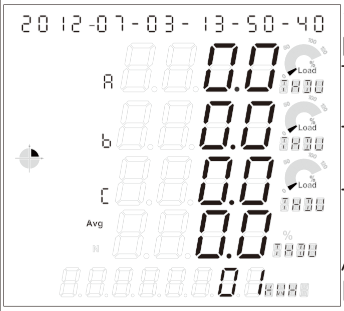
1.1.1-The Value of the Line voltage and the Average Line voltage
A-B Line Voltage

B-C Line Voltage

C-A Line Voltage
Average line voltage(Avg/V)

Effective energy(kWh)

Press Volt/Amp ENTER Key



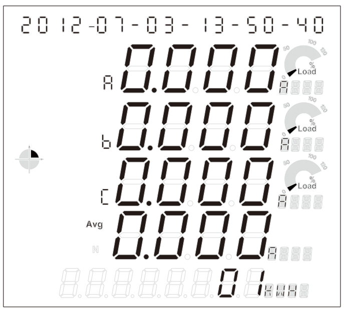
1.1.2-Voltage total harmonic distortion
Phase voltage total harmonic
THDU/ Phase A THD(%)

THDU/ Phase B THD(%)

THDU/ Phase C THD(%)

Average line voltage THD (Avg/%)
Effective energy(kWh)

Press Volt/Amp ENTER Key



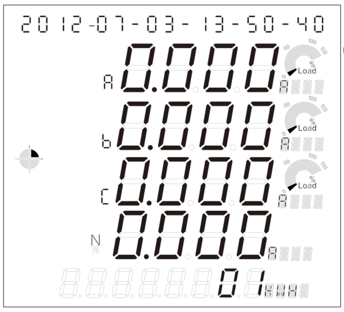
1.1.3-Phase current values and the average
Phase A current

Phase B current

Phase C current

Average current(Avg/A)
Effective energy(kWh)

Press Volt/Amp ENTER Key



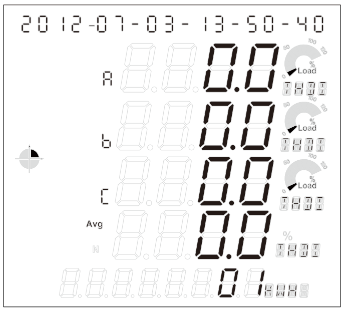
1.1.4-Phase Current and Neutral Current
Phase A current

Phase B current

Phase C current
Neutral Current(N)

Effective energy(kWh)

Press Volt/Amp ENTER Key



1.1.5-Current harmonic distortion rate
THDI/Phase A Current THD

THDI/Phase B Current THD

THDI/Phase C Current THD

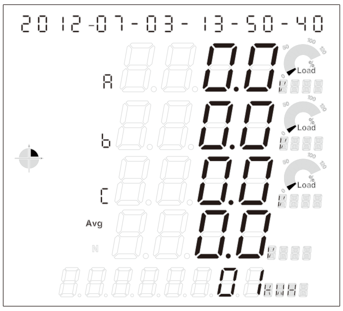
Average Current THD(Avg/%)
Effective energy(kWh)

Press Volt/Amp ENTER Key

To 1.1.1 Display Or
Press Harmonic ◀ Key1 Sec Back to
Measurement screen

Press [◀] Shift KEY (Comprehensive screen)

Normal screen [Harmonic ◀] 1 seconds,
first showed off the voltage value As follows



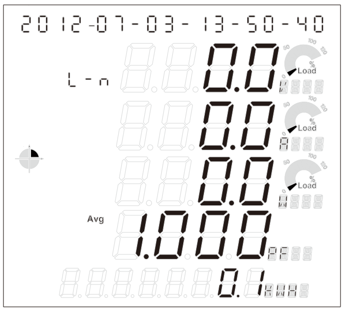
Phase voltage and the Average
Phase A voltage

Phase B voltage

Phase C voltage
Average Phase voltage(Avg/V),

Effective energy(kWh)

Press [Harmonic ◀] Key ↓



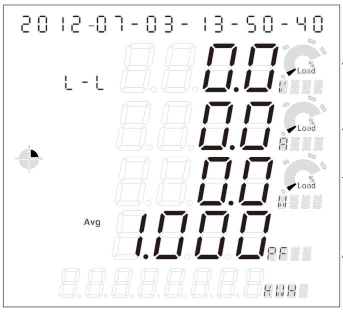
1.2.1-3-phase integrated display-1
Average Phase voltage(L-n)

Average current (A)

Total Effective power(kW)

Average power factor(PF/IND/Avg)
Effective energy(kWh)

Press [Harmonic ◀] Key ↓



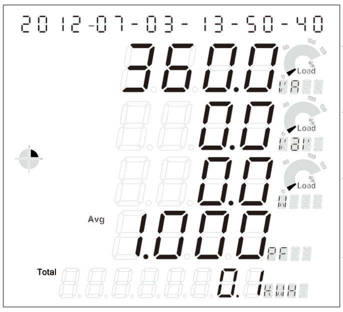
1.2.2-3-phase integrated display-2
Average Line voltage(L-L)

Average current (A)

Total Effective power(kW)

Average power factor(PF/IND/Avg)
Effective energy(kWh)

Press [Harmonic ◀] Key ↓



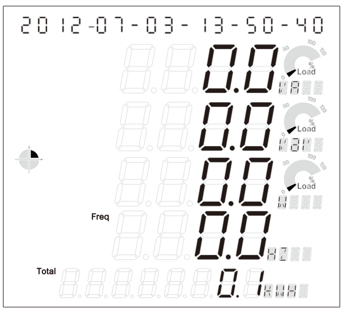
1.2.3-3-phase integrated display-3
Total Apparent Power(VA)

Total Reactive Power(Var)

Total Effective power(W)

Average power factor(PF/IND/Avg)
Effective energy(kWh)

Press [Harmonic ◀] Key ↓



1.2.4-3-phase integrated display-4
Total Apparent Power(VA)

Total Reactive Power(Var)

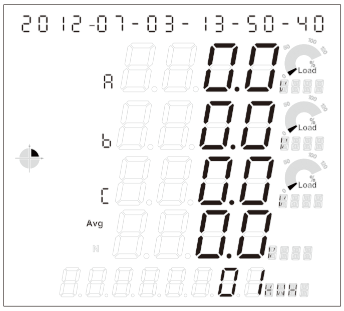
Total Effective power(W)

Frequency(Hz)
Effective energy(kWh)

Press [Harmonic ◀] Key ↓ To 1.2.1 Display Or
Press [Harmonic ◀] Key1 Sec Back to
Measurement screen

Press [▲] Up KEY (Power Parameters)

Normal screen [Harmonic ◀] 1 seconds,
first showed off the voltage value As follows



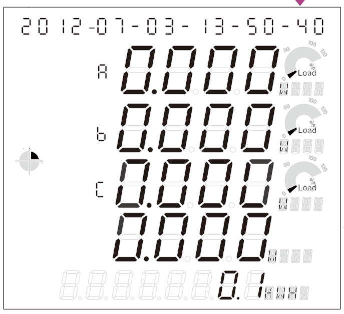
Phase voltage and the Average
Phase A voltage

Phase B voltage

Phase C voltage
Average Phase voltage(Avg/V),

Effective energy(kWh)

Press [Power ▲] Key ↓



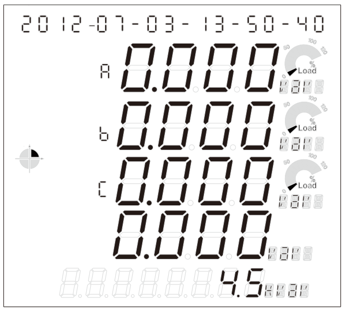
1.3.1-Effective power display
Phase A active power

Phase B active power

Phase C active power

Total Effective power(kW)
Effective energy(kWh)

Press [Power ▲] Key ↓



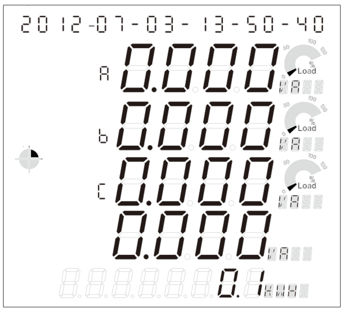
1.3.2-Reactive power display
Phase A reactive power

Phase B reactive power

Phase C reactive power

Total reactive power(kvar)
Invalid electricity(kvarH)

Press [Power ▲] Key ↓



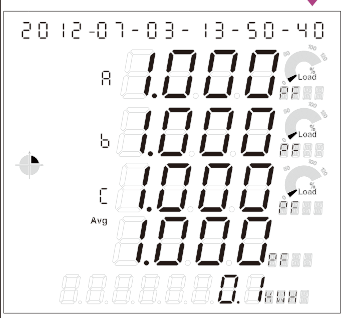
1.3.3-Apparent power display
Phase A apparent power

Phase B apparent power

Phase C apparent power

Total Apparent Power(kVA)
Effective energy(kWh)

Press [Power ▲] Key ↓



1.3.4-Power Factor display
Phase A power factor

Phase B power factor

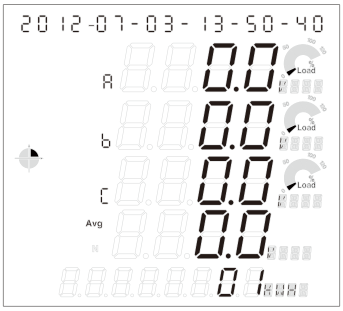
Phase C power factor

Average Power factor(PF/IND/Avg)
Effective energy(kWh)

Press [Power ▲] Key ↓ To 1.3.1 Display Or
Press [Harmonic ◀] Key1 Sec Back to
Measurement screen

Press ▼ Down KEY (Power parameters)

Normal screen [Harmonic ◀] 1 seconds,
first showed off the voltage value As follows



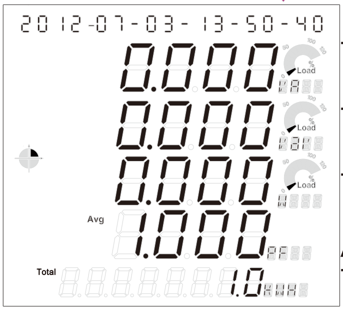
Phase voltage and the Average
Phase A voltage

Phase B voltage

Phase C voltage
Average Phase voltage(Avg/V),

Effective energy(kWh)

Press [Energy ▼] Key



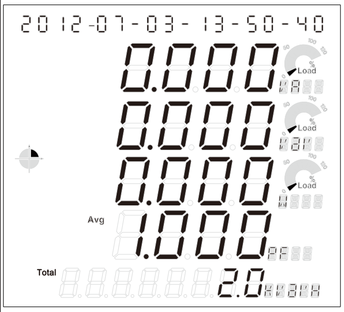
1.4.1-Power display-1
Total apparent power(VA)

Total reactive power(Var)

Total effective power(W)

Average power factor(PF/IND/Avg)
Total Effective energy(kWh)

Press [Energy ▼] Key



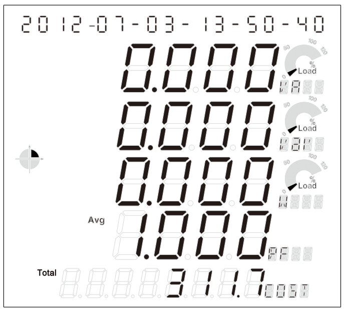
1.4.2-Power display-2
Total apparent power(VA)

Total reactive power(Var)

Total effective power(W)

Average power factor(PF/IND/Avg)
Total invalid electricity(kvarH)

Press [Energy ▼] Key



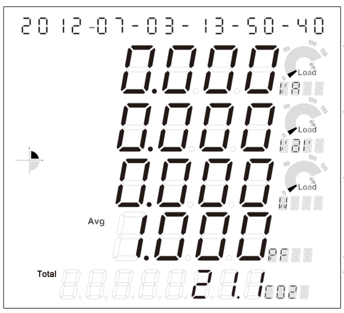
1.4.3-Total electricity bills display
Total apparent power(kVA)

Total reactive power(kvar)

Total effective power(kW)

Average power factor(PF/IND/Avg)
Total electricity bill($)

Press [Energy ▼] Key



1.4.4-Carbon emissions
Total apparent power(kVA)

Total reactive power(kvar)

Total effective power(kW)

Average power factor(PF/IND/Avg)
Total carbon dioxide(CO_2/kg)

Press [Energy ▼] Key

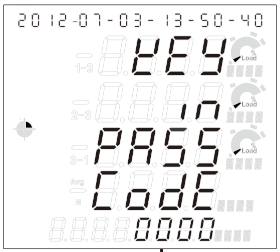
To 1.4.1 Display Or
Press [Harmonic ◀] Key1 Sec Back to
Measurement screen

*Engineers set class, non-personnel do not arbitrarily enter the change, in order to avoid abnormal。

INPUT Group

Operation display

Press ENTER Key Enter the setup menus

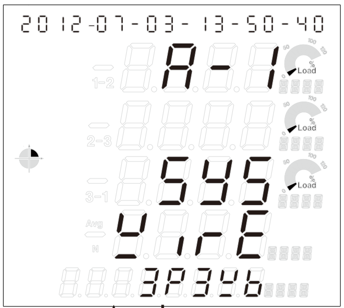


Password
0000~9999

Default:1000

Press ENTER Key: SET
Press ◀ Key:SHIFT
Press ▲ Key:MOVE/INCREASE
Press ▼ Key:DOWN/DECREASE
Press ENTER Key:CONFIRM

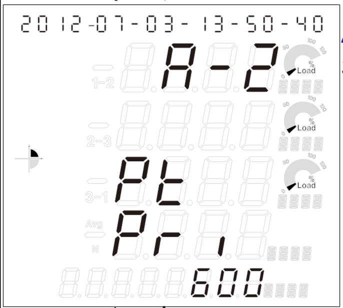
Energy ▼ KEY



A-1 Voltage Phase line set
Set range is as follows:
1P2W/1P3W/3P3W/
3P3W.B(Balanced)/3P3W3/
3P4W/3P4W.B (Balanced)
Default:3P4W

Press ENTER Key: SET
Press ◀ Key:SHIFT
Press ▲ Key:MOVE/INCREASE
Press ▼ Key:DOWN/DECREASE
Press ENTER Key:CONFIRM

Power ▲ ↑ ↓ Energy ▼

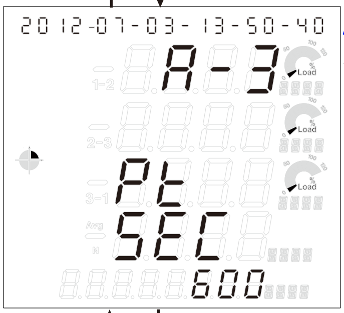


A-2 Primary-side voltage (PT)
Set range:100~500000V

Default:600

Press ENTER Key: SET
Press ◀ Key:SHIFT
Press ▲ Key:MOVE/INCREASE
Press ▼ Key:DOWN/DECREASE
Press ENTER Key:CONFIRM

Power ▲ ↑ ↓ Energy ▼

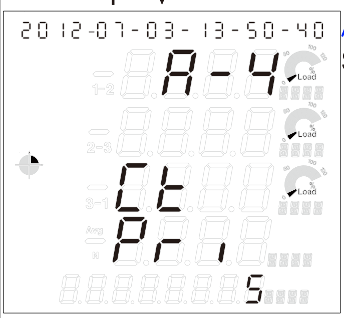


A-3 Secondary-side voltage(PT)
Set range:100~600V

Default:600

Press ENTER Key: SET
Press ◀ Key:SHIFT
Press ▲ Key:MOVE/INCREASE
Press ▼ Key:DOWN/DECREASE
Press ENTER Key:CONFIRM

Power ▲ ↑ ↓ Energy ▼

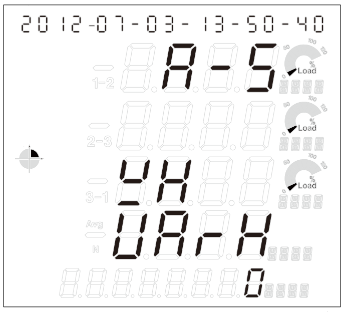


A-4 Primary current (CT)
Set range:5~10000A

Default:5

Press ENTER Key: SET
Press ◀ Key:SHIFT
Press ▲ Key:MOVE/INCREASE
Press ▼ Key:DOWN/DECREASE
Press ENTER Key:CONFIRM

Power ▲ ↑ ↓ Energy ▼

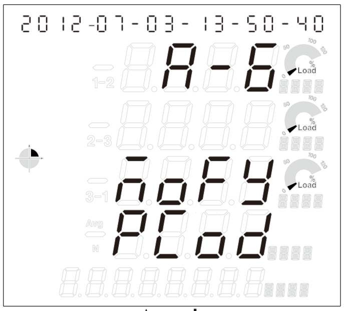


A-5 Watt-h / Var Clear
ClearPasswords:
0000~9999

Zero password please call the company to ask.

Press ENTER Key: SET
Press ◀ Key:SHIFT
Press ▲ Key:MOVE/INCREASE
Press ▼ Key:DOWN/DECREASE
Press ENTER Key:CONFIRM

Power ▲ ↑ ↓ Energy ▼



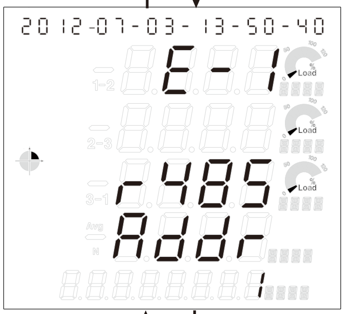
A-6 P.COD
Set range:
0000~9999

Default:1000

Press ENTER Key: SET
Press ◀ Key:SHIFT
Press ▲ Key:MOVE/INCREASE
Press ▼ Key:DOWN/DECREASE
Press ENTER Key:CONFIRM

Power ▲ ↑ ↓ Energy ▼

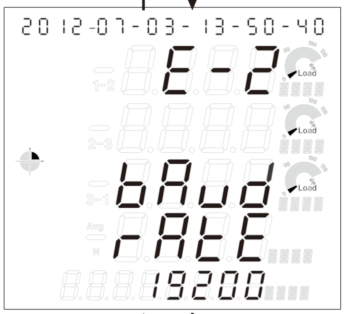
Rs485 Group



E-1 Communication station No.
Set range:001~255

Press ENTER Key: SET
Press ◀ Key:SHIFT
Press ▲ Key:MOVE/INCREASE
Press ▼ Key:DOWN/DECREASE
Press ENTER Key:CONFIRM

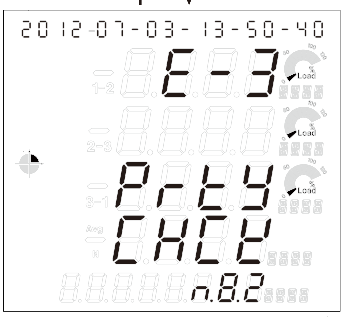
Power ▲ ↑ ↓ Energy ▼



E-2 Communications transmission rate
Set range:
1200、2400、4800、
9600、19200、38400

Press ENTER Key: SET
Press ◀ Key:SHIFT
Press ▲ Key:MOVE/INCREASE
Press ▼ Key:DOWN/DECREASE
Press ENTER Key:CONFIRM

Power ▲ ↑ ↓ Energy ▼



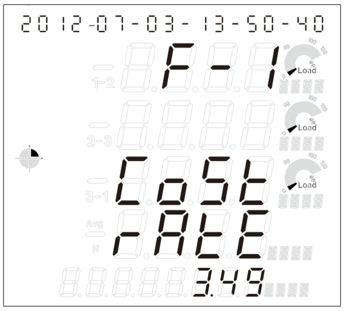
E-3 Parity Check
Set range:n.8.1、
n.8.2、o.8.1、e.8.1

Default:n.8.2

Press ENTER Key: SET
Press ◀ Key:SHIFT
Press ▲ Key:MOVE/INCREASE
Press ▼ Key:DOWN/DECREASE
Press ENTER Key:CONFIRM

Power ▲ ↑ ↓ Energy ▼

NEXT



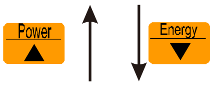
ENEGY Group

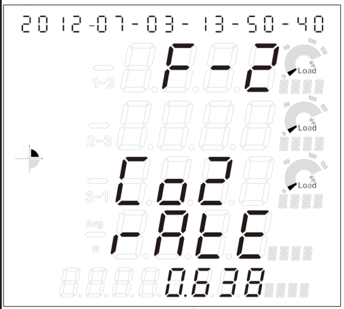
F-1 Tariff rates

Set range:
00.00~99.99
(one dollar/kWh)

Default:2.30

Press ENTER Key: SET
Press ◄ Key:SHIFT
Press ▲ Key:MOVE/INCREASE
Press ▼ Key:DOWN/DECREASE
Press ENTER Key:CONFIRM



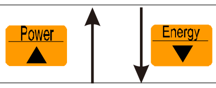


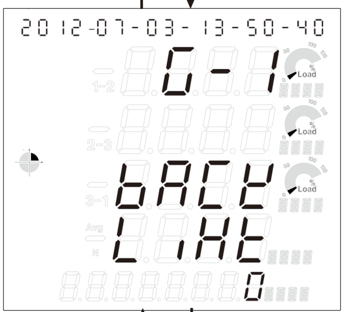
F-2 CO^2 Carbon ratio

Set range:
0.000~9.999(kg/kWh)

Default:0.638

Press ENTER Key: SET
Press ◄ Key:SHIFT
Press ▲ Key:MOVE/INCREASE
Press ▼ Key:DOWN/DECREASE
Press ENTER Key:CONFIRM





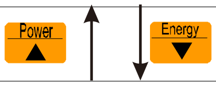
TIME Group

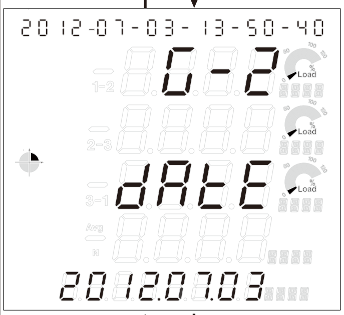
G-1 Backlight time

Set range:0~15(Minute)
Set 0 for Always

Default:1

Press ENTER Key: SET
Press ◄ Key:SHIFT
Press ▲ Key:MOVE/INCREASE
Press ▼ Key:DOWN/DECREASE
Press ENTER Key:CONFIRM

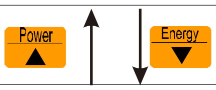


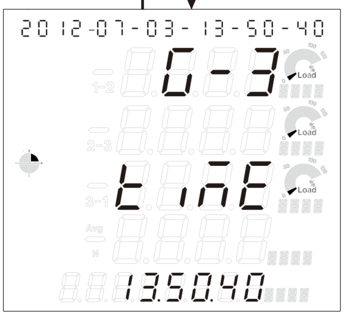


G-2 Date set

Set range:
2000.01.01~2099.12.31

Press ENTER Key: SET
Press ◄ Key:SHIFT
Press ▲ Key:MOVE/INCREASE
Press ▼ Key:DOWN/DECREASE
Press ENTER Key:CONFIRM

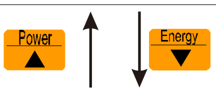


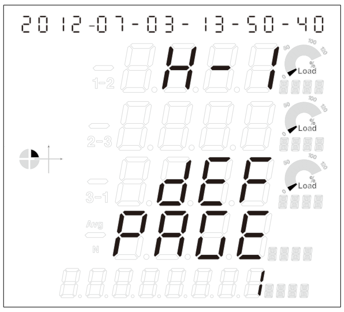


G-3-Time set

Set range:
00.00.00~23.59.59

Press ENTER Key: SET
Press ◄ Key:SHIFT
Press ▲ Key:MOVE/INCREASE
Press ▼ Key:DOWN/DECREASE
Press ENTER Key:CONFIRM



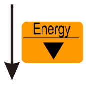


H-1 Permanent screen selection

Set range:1~4

Schedule Description

Press ENTER Key: SET
Press ◄ Key:SHIFT
Press ▲ Key:MOVE/INCREASE
Press ▼ Key:DOWN/DECREASE
Press ENTER Key:CONFIRM

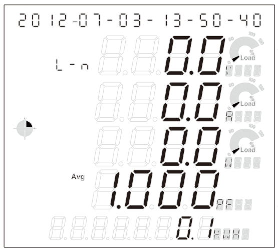


KEY

Back To A-1 Display Or
Press ◄ Key1 Sec Back to
Measurement screen

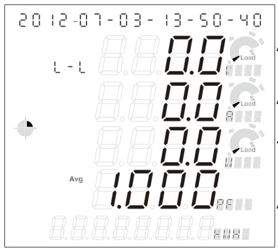
Schedule: The Permanent screen instructions

The first



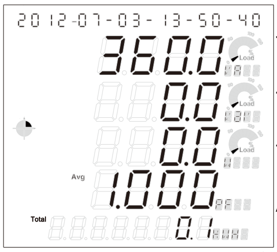
1.2.1-3-phase integrated display-1
Average Phase voltage(L-n)
Average current (A)
Total Effective power(kW)
Average power factor(PF/IND/Avg)
Effective energy(kWh)

The second



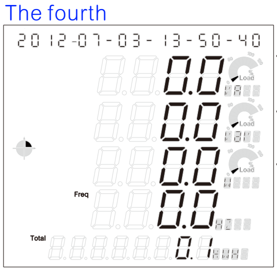
1.2.2-3-phase integrated display-2
Average Line voltage(L-L)
Average current (A)
Total Effective power(kW)
Average power factor(PF/IND/Avg)
Effective energy(kWh)

The third



1.2.3-3-phase integrated display-3
Total Apparent Power(VA)
Total Reactive Power(Var)
Total Effective power(W)
Average power factor(PF/IND/Avg)
Effective energy(kWh)

The fourth



1.2.4-3-phase integrated display-4
Total Apparent Power(VA)
Total Reactive Power(Var)
Total Effective power(W)
Frequency(Hz)
Effective energy(kWh)

RS485 communication parameters address table (Function code: 03h, 06h, 10h)

General class information

Data Name	Register address	Data Format	Data Length	Measurement range	Unit	R / W	Default	Information
Frequency	0000h	XXXX	2	45.00 ~65.00	Hz /100	R		Frequency (high word)
	0001h	XX.XX						Frequency (low word)
Average phase voltage	0002h	XXXX	2	0~500000.0	V/10	R		Average phase voltage(high word)
	0003h	XXX.X						Average phase voltage(low word)
U l lavg	0004h	XXXX	2	0~500000.0	V/10	R		Average line voltage(high word)
	0005h	XXX.X						Average line voltage(low word)
I avg	0006h	XXXX	2	0~10000.000	A /1000	R		Average current(high word)
	0007h	X.XXX						Average current(low word)
In	0008h	XXXX	2	0~10000.000	A /1000	R		Neutral current(high word)
	0009h	X.XXX						Neutral current(low word)
Psum	000Ah	XXXX	2	-999999999 ~999999999	W	R		Total effective power(high word)
	000Bh	XXXX						Total effective power(low word)
Qsum	000Ch	XXXX	2	-999999999 ~999999999	var	R		Total reactive power(high word)
	000Dh	XXXX						Total reactive power(low word)
Ssum	000Eh	XXXX	2	-999999999 ~999999999	VA	R		Total apparent power(high word)
	000Fh	XXXX						Total apparent power(low word)
PF avg	0010h	XXXX	2	-1.000 ~1.000	PF /1000	R		Average power factor(high word)
	0011h	X.XXX						Average power factor(low word)
Ea	0012h	XXXX	2	0~9999999.9	kWh /10	R/W		Effective energy(high word), over 9999999.9 auto Zero
	0013h	XXX.X						Effective energy(low word), over 9999999.9 auto Zero
Er	0014h	XXXX	2	0~9999999.9	kvarH /10	R/W		Invalid electricity(high word), over 9999999.9 auto Zero
	0015h	XXX.X						Invalid electricity(low word), over 9999999.9 auto Zero
Cost	0016h	XXXX	2	0~9999999.9	$/10	R		Total electricity bill(high word), over 9999999.9 auto Zero
	0017h	XXX.X						Total electricity bill(low word), over 9999999.9 auto Zero
CO_2	0018h	XXXX	2	0~9999999.9	kg/10	R		The total carbon dioxide(high word),over 9999999.9 auto Zero
	0019h	XXX.X						The total carbon dioxide(low word),over 9999999.9 auto Zero
UA	001Ah	XXXX	2	0~500000.0	V/10	R		Phase A voltage(high word)
	001Bh	XXX.X						Phase A voltage(low word)
UB	001Ch	XXXX	2	0~500000.0	V/10	R		Phase B voltage(high word)
	001Dh	XXX.X						Phase B voltage(low word)
UC	001Eh	XXXX	2	0~500000.0	V/10	R		Phase C voltage(high word)
	001Fh	XXX.X						Phase C voltage(low word)
UAB	0020h	XXXX	2	0~500000.0	V/10	R		AB line voltage(high word)
	0021h	XXX.X						AB line voltage(low word)
UBC	0022h	XXXX	2	0~500000.0	V/10	R		BC line voltage(high word)
	0023h	XXX.X						BC line voltage(low word)
UCA	0024h	XXXX	2	0~500000.0	V/10	R		CA line voltage(high word)
	0025h	XXX.X						CA line voltage(low word)
IA	0026h	XXXX	2	0~10000.000	A/1000	R		Phase A current(high word)
	0027h	X.XXX						Phase A current(low word)
IB	0028h	XXXX	2	0~10000.000	A/1000	R		Phase B current(high word)
	0029h	X.XXX						Phase B current(low word)
IC	002Ah	XXXX	2	0~10000.000	A/1000	R		Phase C current(high word)
	002Bh	X.XXX						Phase C current(low word)
PA	002Ch	XXXX	2	-999999999 ~999999999	W	R		Phase A active power(high word)
	002Dh	XXXX						Phase A active power(low word)
PB	002Eh	XXXX	2	-999999999 ~999999999	W	R		Phase B active power(high word)
	002Fh	XXXX						Phase B active power(low word)
PC	0030h	XXXX	2	-999999999 ~999999999	W	R		Phase C active power(high word)
	0031h	XXXX						Phase C active power(low word)
QA	0032h	XXXX	2	-999999999 ~999999999	var	R		Phase A reactive power(high word)
	0033h	XXXX						Phase A reactive power(low word)
QB	0034h	XXXX	2	-999999999 ~999999999	var	R		Phase B reactive power(high word)
	0035h	XXXX						Phase B reactive power(low word)
QC	0036h	XXXX	2	-999999999 ~999999999	var	R		Phase C reactive power(high word)
	0037h	XXXX						Phase C reactive power(low word)
SA	0038h	XXXX	2	-999999999 ~999999999	VA	R		Phase A apparent power(high word)
	0039h	XXXX						Phase A apparent power(low word)
SB	003Ah	XXXX	2	-999999999 ~999999999	VA	R		Phase B apparent power(high word)
	003Bh	XXXX						Phase B apparent power(low word)
SC	003Ch	XXXX	2	-999999999 ~999999999	VA	R		Phase C apparent power(high word)
	003Dh	XXXX						Phase C apparent power(low word)
PFA	003Eh	XXXX	2	-1.000 ~1.000	PF/ 1000	R		Phase A Power Factor(high word)
	003Fh	X.XXX						Phase A Power Factor(low word)
PFB	0040h	XXXX	2	-1.000 ~1.000	PF/ 1000	R		Phase B Power Factor(high word)
	0041h	X.XXX						Phase B Power Factor(low word)
PFC	0042h	XXXX	2	-1.000 ~1.000	PF/ 1000	R		Phase C Power Factor(high word)
	0043h	X.XXX						Phase C Power Factor(low word)
LT	0044h	XXXX	1	82=R, 76=L, 67=C		R		Load characteristics, R:Resistive, L:Inductive , C:Capacitive

General class information

Data Name	Register address	Data Format	Data Length	Measurement range	Unit	R / W	Default	Information
THDUAB	0045h	XXX.X	1	0~100.0	%/10	R		AB line voltage total harmonic
THDUBC	0046h	XXX.X	1	0~100.0	%/10	R		BC line voltage total harmonic
THDUCA	0047h	XXX.X	1	0~100.0	%/10	R		CA line voltage total harmonic
THDUavg	0048h	XXX.X	1	0~100.0	%/10	R		Average voltage total harmonic
THDIA	0049h	XXX.X	1	0~100.0	%/10	R		Phase A current total harmonic
THDIB	004Ah	XXX.X	1	0~100.0	%/10	R		Phase B current total harmonic
THDIC	004Bh	XXX.X	1	0~100.0	%/10	R		Phase C current total harmonic
THDIavg	004Ch	XXX.X	1	0~100.0	%/10	R		Average total harmonic current

Input group setting class

Data Name	Register address	Data Format	Data Length	Measurement range	Unit	R / W	Default	Information
Voltage wiring Wire-U	004Dh	X	1	0~6		R/W	5	0:1P2W 1:1P3W 2:3P3W 3:3P3W.B 4:3P3W.3 5:3P4W 6:3P4W.B
PT-Pri	004Eh	XXXX	2	100~500000	V	R/W	600	PT Primary side voltage setting(high word)
	004Fh	XXXX						PT Primary side voltage setting(low word)
PT-Sec	0050h	XXXX	1	100~600	V	R/W	600	PT Secondary voltage settings
CT-Pri	0051h	XXXX	1	5~10000	A	R/W	50	CT Primary current setting
P.code	0052h	XXXX	1	0000~9999		R/W	1000	Clearance password change

RS485 communication group settings class

Data Name	Register address	Data Format	Data Length	Measurement range	Unit	R / W	Default	Information
Addr	0053h	XXX	1	1~255		R/W	1	The Communication Station No. setting
Baud	0054h	X	1	0~5		R/W	3	0:1200 , 1:2400 , 2:4800 , 3:9600 , 4:19200 , 5:38400
Parity	0055h	X	1	0~3		R/W	1	0:N81 , 1:N82 , 2:O81 , 3:E81

Cost group setting class

Data Name	Register address	Data Format	Data Length	Measurement range	Unit	R / W	Default	Information
Cost	0056h	XX.XX	1	00.00~99.99		R/W	2.30	kWh the cost ratio setting
CO2	0057h	X.XXX	1	0.000~9.999		R/W	0.638	kWh of carbon dioxide ratio setting

Time group settings class

Data Name	Register address	Data Format	Data Length	Measurement range	Unit	R / W	Default	Information
Back-Light	0058h	XX	1	0~15		R/W	1	0/1~15Minute, 0 minutes representatives never light up
Year	0059h	XXXX	1	0~99 = 2000~2099		R/W	2012	
Month	005Ah	XX	1	1~12		R/W	1	
Day	005Bh	XX	1	1~31		R/W	1	
Time	005Ch	XX	1	0~23		R/W	0	
Minute	005Dh	XX	1	0~59		R/W	0	
Second	005Eh	XX	1	0~59		R/W	0	

Permanent screen group settings class

Data Name	Register address	Data Format	Data Length	Measurement range	Unit	R / W	Default	Information
Def.Page	005Fh	XXXX	1	1~4		R/W	1	1: 1.2.1 : Average phase voltage(T/L-n/V) / Average current (A)/ Total effective power(kW) Average power factor(PF/IND/Avg) / Total effective energy(kWh) 2: 1.2.2 : Average line voltage(T/L-L/V) / Average current (A)/ Total effective power(kW) Average power factor(PF/IND/Avg) / Total effective energy(kWh) 3: 1.2.3 : Total apparent power(T/kVA) / Total reactive power(kvar)/ Total effective power (kW)/ Average power factor(PF/IND/Avg) / Total effective energy(kWh) 4: 1.2.4 : Total apparent power(T/kVA) / Total reactive power(kvar)/ Total effective power (kW)/ Frequency(Hz) / Total effective energy(kWh)